

Appl. No. 10/658,470
Amendment dated September 12, 2005
Reply to Office action of June 14, 2005

REMARKS:

By the present amendment, Claim 5 has been amended. Upon entry of this Amendment, Claims 5-8 will be pending in the Application.

Support for the amendment to Claim 5 is based on lines 23 to 24 on page 58, lines 7 to 13 on page 60, and lines 21 to 25 on page 61 of the Specification of the present application.

In Paragraph 3 of the Office action, Claim 5 is rejected under 35 USC 103(a) as being obvious over Fukui and Biegler. In Paragraph 4 of the Office action, Claims 6-8 are rejected under 35 USC 103(a) as being obvious over Fukui, Biegler and Kudo or Asanuma.

The amendment to Claim 5 clarifies that the composition used in the present invention is provided on the substrate by using a polymer latex as the binder. Further, the amendment clarifies that the solvent of the coating solution essentially consists of water, as is understood from the usage of the binder in the form of the polymer latex, and so it is not analogous to Biegler as cited by the Examiner in the Office action.

It is known in the art that "polymer latex" is formed by dispersing a water-insoluble hydrophobic polymer in water. However, if the water contains an organic solvent, then the water-insoluble hydrophobic polymer is dissolved in the organic solvent so as to form aggregates, which inhibit the function of the water-insoluble hydrophobic polymer as a binder. Therefore, in order to be able to use the polymer latex for forming a coating solution, the water necessarily contains no organic solvent, or a very small amount of organic solvent such that substantially no particular effect is caused.

Unlike the organic solvents that are used as a solvent for layer-coating, volatilized and captured by the filter, as taught by Biegler, the volatilized substances generated in the method of the present invention essentially consist of the organic compounds contained in the composition.

To be precise, the composition might contain an organic solvent which is used for dissolving organic additive compounds and thus inevitably brought into the

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photothermographic material of the invention. However, an amount of any such organic solvent must necessarily be very small.

As is clear from the above, the problem is one that had not been observed before the present invention. The problem is that, in spite of being different from organic solvent-using methods like Biegler, the image forming method using a water-based coating solution suffers from stains generated from organic compounds contained in the composition under the conditions of short thermal development time, in the range of 7 to 15 seconds, and repeated use over a long period. Further, the use of the filter of the present invention is the first solution to overcome the above-described new problem.

It has been conventionally-known by the disclosure of Biegler to collect volatilized substances that are generated from organic solvents, by filter. However, before the achievement of the present invention, it could not have been expected by those skilled in the art that the use of a water-based coating solution might cause the above-described new problem, nor how the problem could be solved.

In view of the above amendments and remarks, Claims 5-8 are hereby submitted in condition for allowance. Early and favorable action is respectfully requested.

Respectfully submitted,



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